User Manual for LibreCad 2.0

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INTRODUCTION TO LIBRECAD

This is the User Manual for LibreCad. I have written this manual using the KISS principle (Keep It Simple Stupid) this manual is designed in Chapters and simple instructions so that even someone entirely new to LibreCad and CAD in general can learn to use it. This manual is designed for the user to follow as the user is using the program in front of him.
So it would be to the users advantage to print out a copy of the manual to use to follow the lessons given. I hope you enjoy your learning experience.

This manual is in English but permission is given to freely translate this manual into other languages and file formats.

OVERVIEW

Go ahead and start up LibreCad and take a look at what you see on the screen. Notice across the top there are words that you click on for pull down menus. Go ahead now and click on each word to see the menus. Don't select anything from the menus as of yet, we will examine some of the selections in as we work through the manual.
Notice Icons below the words. Put your cursers over each Icon without clicking and the program will show you what the Icon does. You will also notice Icons on the left side. Move your curser over these Icons also and you will note information on these as well. The top 7 are drawing Icons, The next 2 draw text and dimensions, The next Icon on the left draws cross hatch and the one next to it is snapshot which is non-functional in this version, The last 4 open different menus and functions.

Notice the bottom of the screen and you will see the command line. You can actually draw using commands that you type in this area. We will use this in a later lesson to get you familiar with the command line.
On the right side you will notice areas for creating Layers and Blocks. We will also use these in later lessons.
The last area we want to look at is the Drawing area or the Workbench as it is sometimes called. This is where you will do all of your drawing, dimensioning, etc. You can also change the settings of the program and drawings too. We will examine this next.

1. CHANGING PROGRAM AND DRAWING SETTING

Lets take a look at the Program settings first.

First, click on edit at the top of the page. Then select application preferences. Notice the box that pops up. Notice you can change quite a bit under appearances. At this point we are going to use the defaults the program has set up for us. Make sure however that the Crosshairs is selected This turns the big Red Crosshairs in the work area on and off . Also make sure that Automatically scale grid is selected also.
Now click the tab Paths. Notice we can define folders for things like fonts, hatches, part library, templates. We want to create a folder for our Part Library and also Templates. For templates, type the following

C:\Documents and Settings\templates

C is the drive, \ User defines this \templates

Your templates will be saved to this folder.
For your Part Library :

C:\ User defines this \library

And now the 2 new folders are defined, and your parts and templates will be saved there. Next click on the default tab. We don't want to change anything here, but notice that we can change units here for instance like Millimeters to inches or any number of units. Also, it is always good to have autobackup on. If you have a shutdown for any reason you won't have to start all over again which can be very frustrating. When I taught C3P I ALWAYS told my students to save their work frequently and I am also telling you to do the same.

Ok, now click ok to close the box and we will look at Current drawing preferences. Everything you do here affects the drawing you are currently working on ONLY. So lets take a look.

Click edit, then select current drawing preferences. Notice the pop up box.
Click on the Paper tab. Here you can change paper size and also paper orientation.

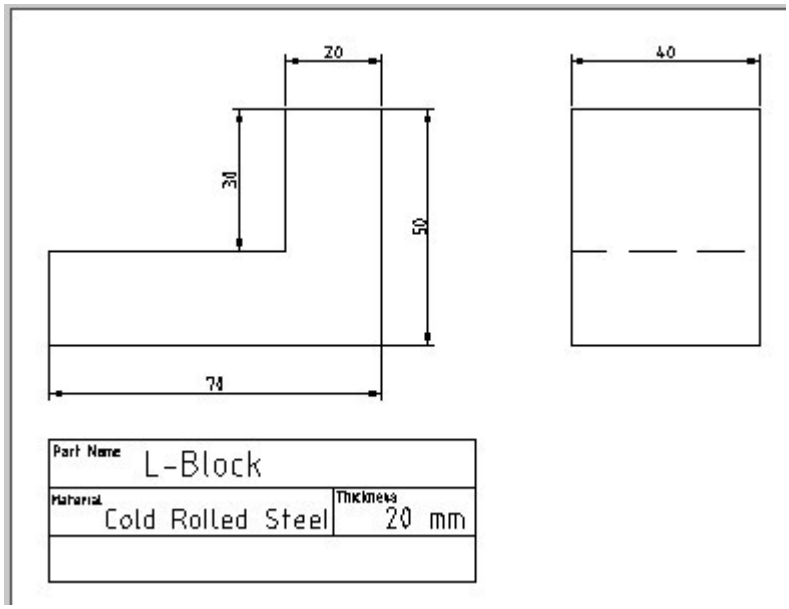
Click Landscape and pull down the size menu and scroll to select letter. This setting will allow printing from a home computer. Also most drawing projects use a landscape orientation so that's why we pick landscape.
Now click on the units tab. Here you can change units like we did earlier but the choices are only in effect for this drawing. Here we may want to change the Length from 4 decimal places to just 2. Do this by clicking precision and selecting 0.00 from the pull down menu.

Now click on the Grid tab. Here we want to make sure that show grid is selected and also orthogonal is selected. Notice you can select isometric grid too but don't do that now, we will play a little bit with that later on.
Now click the Dimensions tab. Notice there is quite a bit you can change, but we will leave that as is for now.
Now click on the Splines tab. Here you can change line segments but again leave the setting as is. Now click ok to close the box.

We have now covered settings changes and we also now have a blank drawing that we can save that will automatically load these settings when we want to do a drawing.
Now click file at the top, select save as, type blankdrawing, and click save.
Congratulations, you just saved your first drawing.

2. DRAWING LINES IN LIBRECAD

Now we are going to begin drawing in LibreCad. We will start with lines. Lines can be anything from lines to circles, rectangles, Arcs, ellipses, splines, polylines, and even text. We can even change the color, thickness and properties of the lines. You will learn how to do that in this lesson.



Above you see an example of a simple part drawing that a tradesman might get from an engineer to make. It contains all the information needed to make this part.
So now lets look at drawing lines.

Ok, lets begin,

1. click file at the top of the page, then open and click on the file we saved earlier called blankdrawing.dxf
2. Before we go any further, look at the big red crosshairs at the bottom. It is important to note that the horizontal line in the crosshair denotes the X coordinate and the vertical crosshair denotes the Y coordinate. The centerpoint of the crosshairs denotes X=0, Y=0. Usually all drawings start at 0,0 so for the most part, the first point of your first line will start there. The points of the grid are

spaced 10 millimeters apart so, that means if your crosshair center is 0 then moving right of that on the X (horizontal) the next point is 10 millimeters (from the crosshairs) the next point is 20 millimeters, the next 30 millimeters and so on. Moving from the crosshair center (0) upwards on the Y (vertical) the next point is 10 millimeters, then the next point is 20 millimeters and so on. This will be especially important when we draw some lines from the command line on the bottom. If all this is hard to remember don't worry, we will create a help layer later on as a reference.

3. Before we draw anything, click file, then save as, then type lines and save the drawing. What we did was put the blankdrawing file away and now we have a file on your workbench called lines. This is the drawing we will use for practice drawing lines.
4. select snap from the top menu then select snap on grid. This will make it much easier to draw strait lines.
5. select draw then move your curser down to lines and then over to 2 points and select it. We are going to draw a line using 2 points.
6. move your curser over to the red crosshairs. Notice the your curser is now a crosshair and you have orange reference lines following it as you move to the red crosshairs. Notice also that the red point snaps from point to point on the grid now.
7. put the crosshairs on your curser over the center of the red crosshairs and left click 1 time.
8. without clicking move your curser 50 millimeters to the right (along the X axis) remember that each point represents 10 millimeters. When you get there, put the crosshairs over the point and left click once, then right click 2 times to come out of the drawing command. You have created a line.
9. Save your work thus far by clicking file save or the disk Icon at the top under the menu bar.
10. We can also draw several lines one after the other easily.
11. click draw, then lines and choose 2 points
12. You will notice that there is a red point where you left off drawing the last line. Move down and left click on that point 1 time.
13. without clicking the mouse move your crosshairs (curser) up (Y axis) 50 millimeters and left click 1 time.
14. now without clicking move your crosshairs (curser) to the left 50 millimeters. Left click 1 time only.
15. Now move your crosshairs (curser) down 50 millimeters to the big red crosshairs and left click 1 time, then right click 2 times. You will notice that you drew a square. This is the way that you can draw several lines in sequence at one time.

Rectangles

Of course if you need to draw squares and rectangles there is an easier way to do it.

1. click on draw, then line, then select rectangle.
2. Move your crosshairs (curser) down to any point to the right of the square you drew and left click 1 time.

3. without clicking move your crosshairs (curser) diagonally down to any other point and left click 1 time, then right click 2 times and notice that you have drawn a square or rectangle easier and in less time. Now you have another drawing tool in your arsenal of tools.

Circles

We will now draw a circle.

1. click on draw, then circle this time then select center, point.
2. move your crosshairs (curser) into the first square we drew. Select any one of the center points and left click 1 time.
3. Move your crosshairs (curser) to the right 10 millimeters (that is the next point over) and left click 1 time then right click 2 times. You now have drawn a 20 millimeter circle inside the square. This is just one of the many ways we can draw a circle but the center, point method is used most often.
4. Save your work at this point by clicking file, save or the save Icon below the top menu.

Now, we are gonna do a little teaser using the modify option. We will work with modify at a later time but I wanted to tease you a little.

1. select modify, move down and select stretch.
2. if you notice on the very bottom of the screen you will see a green hand and you will notice it says specify first corner (this is a prompt to help you). It will always show you what to do next. Quite handy, and it is a feature we used often when learning C3P when I taught it. Lets continue now.
3. select the top right point on the second rectangle or square that you drew.
4. move your curser without clicking to the right to the next point and then move your curser down to the bottom point that is 10 millimeters away from your square or rectangle. Click 1 time. Notice the prompt on the bottom is asking you to choose a reference point. Move your curser over to the right edge of your rectangle and left click anywhere on that line.
5. The prompt now asks you to select a target point. Move your curser to the right 10 millimeters (1 point) and left click 1 time, right click 2 times. Notice you have made everything longer on that on side by 10 millimeters. You can also use this method to shorten the side too.

Just thought I'd throw that in as a teaser. But now it is time to save your work once again so do it now.

Icons

So far we have used the menu on top to draw with. Some people prefer to use the Icons to draw. If you look on the left side you see 2 columns of Icons. When you click the Icons a new menu with different Icons appears. Lets see how that works. Move your curser over to the left and place it over the slanted line Icon. You immediately see a different group of Icons appear. These Icons have to do with drawing lines. Remember when we drew a line using 2 points earlier ? well, if you click the Icon that has a slanted line with a green

point on each end, you will be able to draw the same kind of line we did from the menu earlier.Also, you can see an Icon that has a rectangle and 2 green points and this will allow you to draw a rectangle like you did before. Try it now and see for yourself. You now have a choice…you can draw with the menu across the top or use the Icons. Different people have different preferences.
Our workbench is pretty cluttered now so lets delete some lines. It is very easy to do this.

1. move your curser over to the circle you drew and click on the edge 1 time. Notice the circle turns to a red dotted line. This means it has been selected.
2. now, simply push the delete key on your keyboard. You have deleted the circle. One thing to note is if you delete a line by mistake, you can always bring it back by clicking edit on the menu bar and clicking undo.
3. If you want to delete everything you drew, than the easy way would be to select "select" on the menu bar and then click on select all. Then press the delete key on your computer. Everything is deleted but, once again, if you made a mistake then select edit and then undo to bring it back.

Moving a line

Sometimes it is necessary to move a line because we need it to be in a different place. Lets see how that is done.

1. Move the curser over to the line you want to move and click on the line 1 time to select it.
2. now touch the line with the curser and hold the left mouse button down.
3. use the mouse to move the line to a new location and left click the left mouse button on time and then the right mouse button once. You can see the line has been moved. Click on the line with the left mouse button 1 time to deselect it.

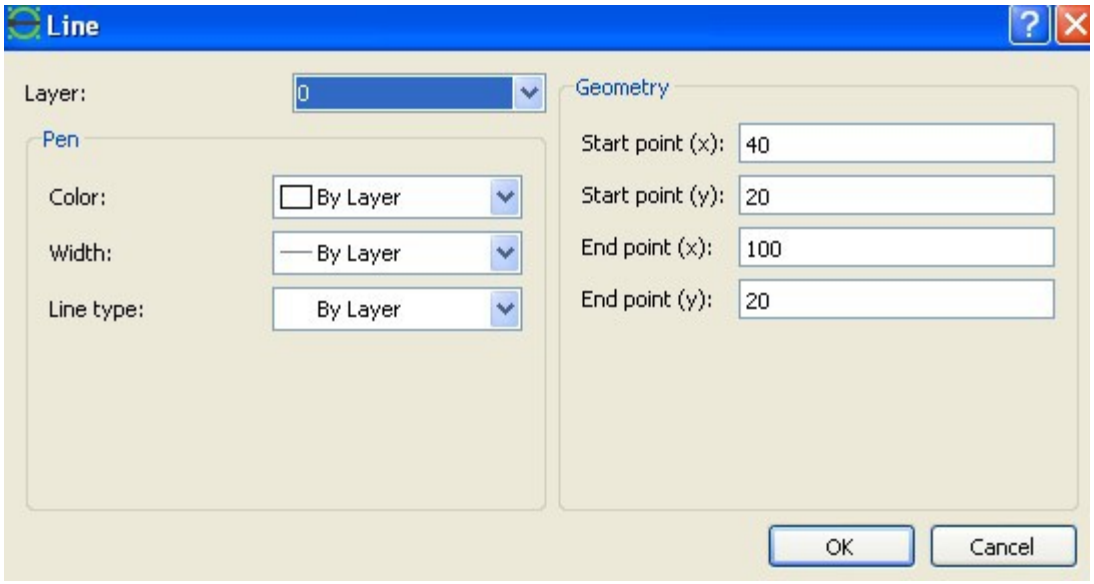
As you can see, it is very easy to do. This also works with circles, ellipses, and all lines. The one thing you have to remember though is if you want to move a rectangle or square you need to select each side first. (If you select only one side then only one side will be moved).
Now is a good time to save your work so go ahead and do that.

Changing Line Properties

Ok, we have drawn our drawing and now we need to change some of the line properties. We can do this through the modify menu. We can change line colors, line thickness, type of line, and even change length and location through this menu. Lets see how that works.

1. Make sure you have at least 1 line drawn on your workbench. If you don't, then go ahead and draw one.
2. Once you have this, go ahead and click on modify on the menu bar. On the pull down menu, select properties.

3. go ahead and place the crosshair on a line on the workbench and left click 1 time. You will see a popup box like the one shown below.



Lets take a look at the line box. Look at the choices on the left color, width, and line type. For color, you can change the line color of the selected line by clicking the color menu and selecting he color you want. Go ahead now and select the color green and then click ok. Notice the line on the workbench is now green. You can change the line color as many times as you wish using this method.
Lets look at line type now. Put the white crosshairs over the line again and click. Our line box pops into view again and this time we want to click the line type and a pull down menu will appear. Notice you have many different line types to choose from. We will select dash from the pull down menu and then click ok. Notice the line on the workbench is now a dash line. In a drawing, a dash line usually denotes a hidden feature. If you remember the L-Block drawing earlier you see a dash line on the front view because base surface is hidden from view in the front view.
Line width is changed in the same way. You have choices on how thick the line should be and the selection works the same way as the other two.
Why don't you take some time now and experiment with line modification. Try drawing some circles and rectangles too and see how line modification works for them as well. When you are finished, go ahead and put away your line drawing by saving it and then click close.

3.DIMENSIONING AND TEXT

We have drawn our work and now we need to add dimensions and text. First of all, lets look at dimensioning a drawing.

Dimensions

To start we need to create a drawing. So lets start a new one.

1. click file, then open, and select blankdrawing and bring it back out on the workbench.
2. the first thing you are going to do is click file, then save as and type dimension and text and then click save. We now have a new drawing called dimensions and text on the work bench.
3. the first thing we need to do is draw a simple object to dimension so now is a good test to see how much you remember from the drawing lesson. Pick and spot on the workbench and draw a rectangle. It can be any size or shape you want. Go ahead and do this now. If you have a problem, refer back to the drawing section of the manual.
4. When you have finished go ahead and save your work by clicking file, save or the save Icon on the top.
5. Now click dimension from the menu bar on top. You will get the pull down menu as shown below.

Lets look at the menu a moment. Notice several options are available to us. The first 4 are for dimensioning lines, the next 2 allow us to dimension a circle by defining either the radial (radius) or diametric (diameter) of a circle. The next one, angular, will give us the angle in degrees of an object. The last one is leader which is used with text in a drawing and we will use that later in drawing. So now lets continue

6. Select horizontal from the dimension menu
7. move the crosshairs over either the left top point or bottom left point of your rectangle and click 1 time.
8. move the crosshairs horizontally to the right to the right edge of the rectangle and click 1 time
9. without clicking the mouse move the line up or down an you will notice the dimension appears. You can now place it where you want to and when you are satisfied left click 1 time to set it and then right click 1 time to come out of horizontal dimensioning.
10. Notice the Icon menu on the left side now. You can select a dimension option from that menu also now. (as long as you only right click 1 time when you finish a dimension the dimension Icon menu will be on the left).
11. select vertical from the Icon menu and select the upper left point of the rectangle and click 1 time.
12. move down and select the bottom left point of the rectangle and click 1 time.
13. without clicking move your mouse to the right and the vertical dimension appears. Move it where your want it and left click 1 time and right click 1 time and now you have dimensioned the rectangle.

If you don't like where you put the dimension, or you need to make room, you can move the dimension as follows:

14. put your curser on the dimension line and click 1 time.
15. Notice the line turns to a red dotted line to show its selected. Notice also a blue point by one of the dimension arrows.
16. touch your curser to the blue point and hold down your left mouse button. Keeping the button held down move your mouse and you will see the dimension move with the curser. Move the dimension where you want it and left click 1 time to set the new position. If you are satisfied then right click 2 times to come out of the command otherwise grab the blue point again and move it where you want it. Then left click 1 time and right click 2 times.
17. click on the line 1 time to deselect it. You will notice the line change from red back to white.

Now lets draw a circle. Put the circle in any available open space. Again, if you have problems, refer back to drawing a circle we covered earlier. This is good practice for you too. As we go further into the manual, you will become more familiar with drawing that it will become like second nature to you.

To Dimension the Circle:

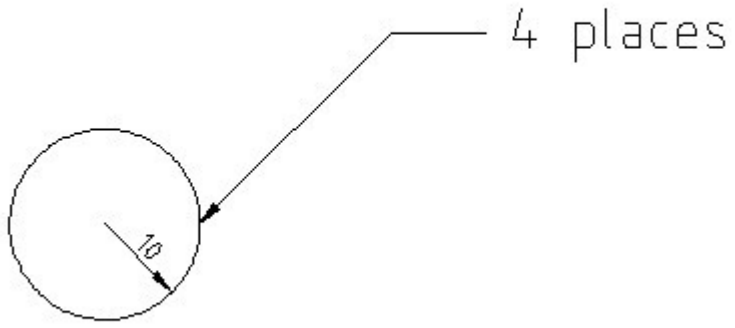
1. Select Dimension and click Radial on the pull down menu
2. touch the edge of the circle with your curser and click 1 time
3. without clicking your mouse, move it away from the circle. Notice the dimension appears. Now move the around the circle and you will see the dimension moves around the circle. Pick a spot you want your dimension and left click 1 time and right click 1 time to come out of the command.
4. If you are not happy with where the dimension is, then you can move it again by clicking on the dimension and notice it turns red to show its selected.

5. Touch the curser to the blue point on the edge of the circle and hold the left button down. Notice when you move the mouse you can move the dimension. When you have it where you want it release the left button and click the left button 1 time. If you are happy with the position right click 1 time to come out of the command and left click 1 time with your curser on the dimension to deselect it and the dimension will change to its normal white color.
6. Take the opportunity to save your work now.

Dimensioning the diameter of the circle is done the same way as the radius. I want you to do that now by yourselves. Again, this is good practice and kind of a self-test to check how you are doing. You can use the dimensioning a circle as kind of a guide if you get stuck (just remember that when it says radius, to substitute the word diameter). Go ahead and try it now.
One other point I want to make here on dimensions. You can change the color of your dimension if needed. You do this by clicking modify on the on the menu bar on top and then clicking properties. Put the crosshairs over the dimension and click. A box will pop up and it has a pull down menu under color that will do that for you. Just click on a color and then ok and you will see the new color on your dimension. To change a dimension height, then click on edit on the menu bar and choose drawing preferences. Click the dimension tab and change the height area by typing in a new value. Then you click ok and the dimension size will change.

Drawing a leader line

Notice that I said draw. This is not on the drawing menu itself, but is found on the dimension menu. A leader is usually used together text as part of dimensioning a drawing. It is adding a note to the drawing. Note the example below.



This is a way of adding a note to a drawing as a way of communicating information about the particular entity. A tradesman would look at this note and know that there are 4 holes and they are all 10 mm. radius even if the other 3 holes were not dimensioned. Since we are using dimensioning and text this time it will provide a good lead in to our discussion of text in this chapter.

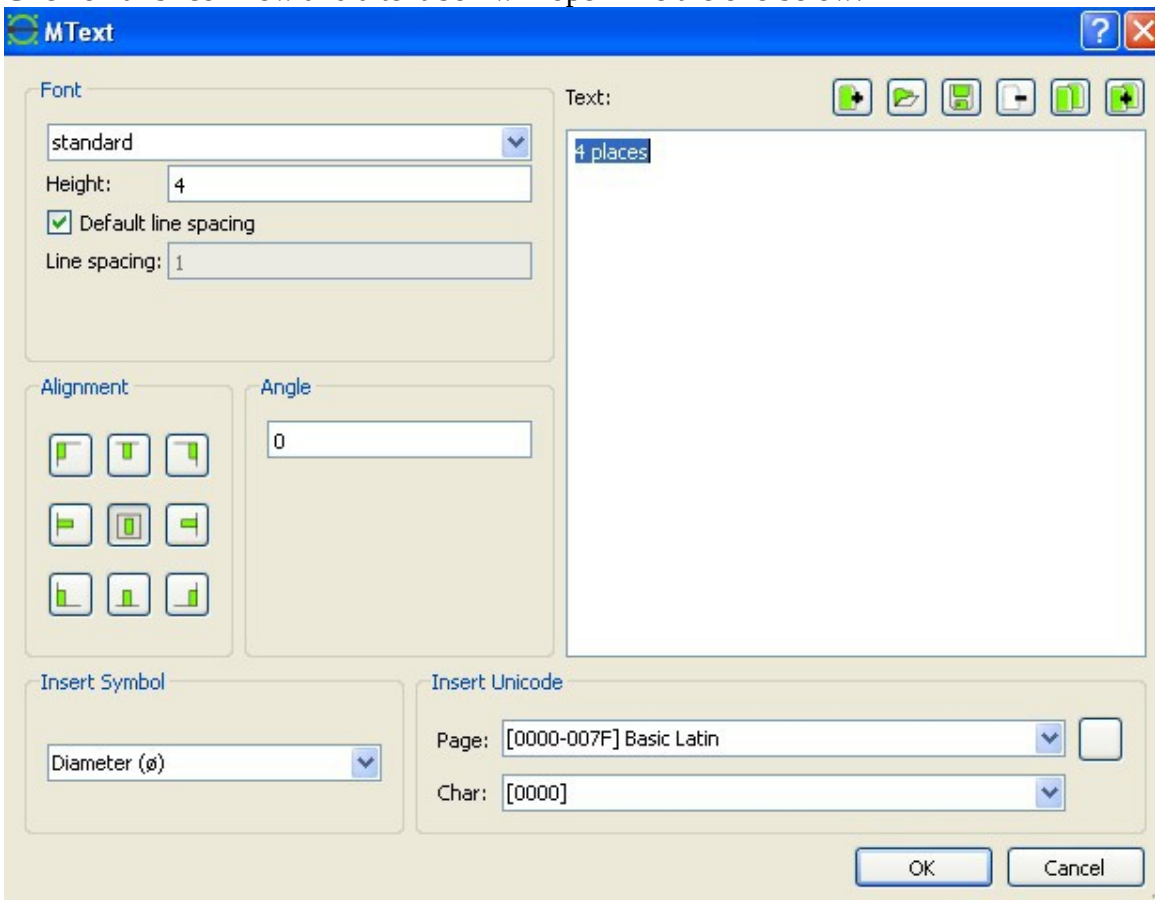
Lets try drawing a leader. Use the circle you created in the last exercise:

1. Click dimension from the menu bar at the top. The leader is the last option on the pull down menu so click it.
2. move the curser down to the circle and click on the top right edge of the circle.
3. without clicking move your curser diagonally away from the circle about 20 mm and left click 1 time.
4. move your curser horizontally to the right about 10mm then left click 1 time. This sets the position. Right click one time to come out of the command. Notice an arrow is now on the leader on the end that touches the edge of the circle.
5. Now save your drawing by clicking file save or the save Icon above.

This completes the drawing of the leader. All that is left now is to add text.

Adding Text to a Drawing

Now we will add text to the drawing. This adds notes and other important information to our drawing. Notice on the left Icon Menu there is a large **A** Icon. This is the text Icon. Click on this Icon now and a text box will open like the one below.



Lets take a look at this box. Notice there are many options you have. Starting on the top left you can choose the Font. Click the arrow and you can see on the pull down menu you

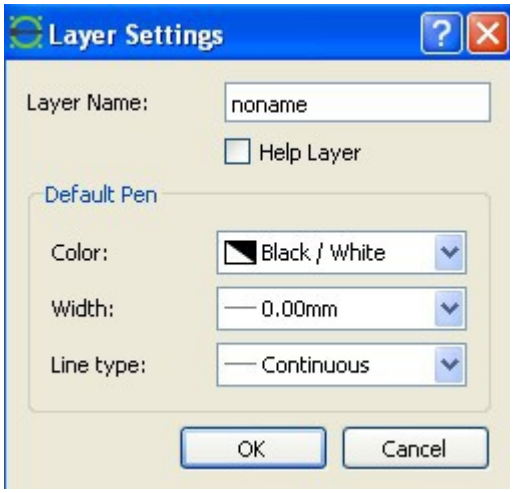
have several fonts. We will play with these options a little later but for now, choose the standard font.
The next option is text height which is how big the text will be. We don't want it too big or too small so 4 would be a good height to type in that box. So go ahead and do that.
Next down is spacing and the default spacing is good so leave that as is.
Move over to thee right side now and click inside the text box. You are going to type 4 places and then click ok on the bottom. The box will close and you notice you have the yellow reference lines and the words 4 Places by the crosshairs. Use your mouse to move the text up by the right end of the leader and left click 1 time and right click 1 time to set the text. You can move the text by clicking the text to select it (at this point you might want to turn off grid snap by clicking the snap on grid Icon on the lower top Icon menu). You will notice when you clicked on the text, it turned red to show it is selected and there is a blue point by the text. Put your curser on this blue point and hold down the left mouse button and move the text where you want it and click the left button 1 time and right click 1 time. Your text is now where you want it.
Save your work again at this time.
Now lets look at the text box again. Look at the font area and click font and look at the choices. Usually for drawings you will use either the standard font or the iso font but there are many more choices. Notice below that the height option also. Within the height box you can type in any size you want. The lower the number the smaller the text and the larger the number the larger the text. I am going to leave it to you now to type a word or two into the text box, select a font, type in a height click ok and insert the text into the drawing where ever you have some space. Try it several times with different fonts and sizes for practice. Get a good feel for this so you will become very familiar with it.
When you are done, save your file and close it to put it away.

4. LAYERS

Now we are going to touch on Layers. These are especially important in certain drawings. I want to point out one example now and I am going to get kind of technical here so please bear with me. Engineers will understand what I am saying but this may be more challenging to understand for others so I am going to try to make it as simple as I can. Layers are especially important in Assembly drawings. An Assembly drawing is a drawing showing 2 or more parts as an assembly on a drawing. Each part is drawn on its on its own layer and when all the layers are shown on the drawing you have the complete assembly in view. In the Automotive industry, an Assembly drawing may show a complete car with 50 or more layers each layer showing a different part. Not only do they show the parts, but also how they fit together in an assembly. By studying this you can find any mismatches that may occur in assembling the vehicle. Having been in the Automotive industry myself, I can't tell you how many times I have looked at these drawings and found gaps between parts which wouldn't allow the parts to be welded together or parts too long that would interfere with other parts. By seeing these mistakes before the car goes into production, it can be corrected quickly. If not found before production, then this causes car recalls that you see now and then or halts and delays in production of the car.
So now we are going to work with Layers. But before we do so, lets take a look at the Layer box area. This is located on the right side of the work bench. The Illustration below shows the Layer box.

Looking at the Layer box we note some Icons. The eyeball turns on and off the Layer's visibility. The plus sign when we click it will produce a new Layer and we will look at that in a minute. The minus sign will delete a layer and here you must be careful because it is very possible to accidentally delete the wrong layer so be careful. The last Icon on the right is the modify Icon and allows us to modify the attributes of the Layer or rename it.

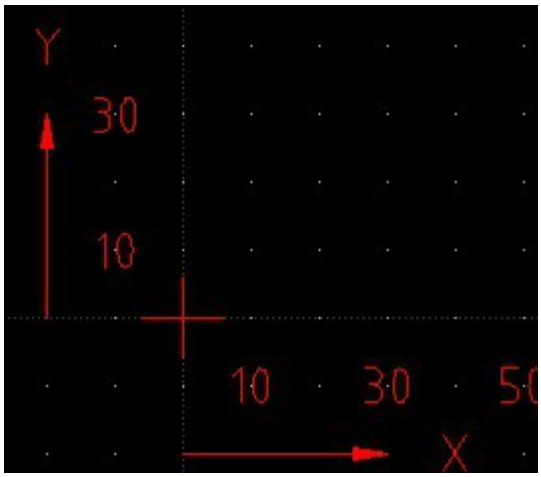
Below the Icons we have the Layer list. Here all the Layers in the drawing will be shown and if they are visible or invisible and if they will print. For instance, a help layer will be shown but will not print which makes it ideal for putting reference lines and points for your own use in working on the drawing. We will create a help layer now. First of all, click file and then open and bring your blankdrawing.dxf out onto the workbench then go ahead and click on the plus Icon in the layer box now.



Notice a Layer settings box pops up like the one above. Click in the layer name box and delete noname and type reference. Next check the box Help Layer. In the default pen area click color and then choose red. What this does is make the default drawing color red so that all lines and text drawn on this layer will be red. Leave the rest as is and click ok. Notice on your layer list you have a reference Layer now. Go ahead and save the drawing by clicking file and then save. What we have done is saved this layer as part of our blankdrawing.dxf so that when we use this blank drawing the reference layer will always be loaded with the drawing.
Now we are going to add some reference text to this layer.

1. Click either draw, text or the text Icon on the left Icon panel
2. The text box will open. In the text box type X. Make sure it is a capital X. In the height box type 5 and then ok at the bottom.
3. Drag the X down below the Big Red Crosshairs and move it to the left about 50mm.
4. Left click 1 time and right click 2 times. The X is set in position.
5. Repeat step 1. In the text box type Y. Click ok
6. Drag the Y to the left of the Big Red Crosshairs and up 50mm from the Crosshairs.
7. Left click 1 time and right click 2 times and the Y is set in position.

We are now going to use the leader drawing command to draw a couple of arrows. This will further help us to define direction. We want everything to look as in the picture below.



To get the arrows:

1. Click draw on the menu bar and then leader.
2. In order to place the arrow properly, we need to left click 1 time at the 30mm and move back to 0 and left click 1 time to set and right click 1 time to make the arrow appear. Do this with both X and Y coordinates.
3. You can now add numbers if you wish like I did using the text box like we did before. This will complete our reference layer for now.
4. Click save or the save Icon to save the layer as is.

This reference layer will especially help us when we use the command line to draw lines. It will also remind us of the X and Y axis and which is which.

5. USING THE COMMAND LINE

There is another way of drawing in LibreCAD and that is with the command line. By using the command line we can place entities specifically and accurately in a location in a drawing. We can draw lines, rectangles, circles and more. The command line appears on the bottom of your screen in LibreCAD and looks like the picture below.

Notice there is a box next to the word command. This is where we will type our information. To activate the box we only need to click inside the command box and you will see that it turns blue to show its activated and awaiting you command.
Before we use this box however we need to do 2 things. First, is you notice the layer list, there are 2 layers now. You notice that one will have a grey stripe though it. The grey stripe indicates the active layer (like in active for drawing). We need to make sure that layer 0 has the grey stripe. If it does not, click on it now to activate it for drawing. Also while you are in layer 0 click the edit icon and make sure the layer 0 is not checked as a help layer. If it is uncheck it and check ok. If you don't do this, all the lines you draw will be infinity which means they have an indefinite length.
The second thing we need to do is click file and then save as from the pull down menu. We will save this drawing as L-Block. Click save and we will be good to go with our first drawing. We are going to draw the L-Block using the command line. The L-Block is an actual Automotive fixture part used in the fixtures that surround a car as it is being built. It is used as a stop block in the fixture to hold a part in correct position for welding.
To use the command line we need to know some things first. You notice in the drawing there is an X axis which is horizontal direction and a Y axis which is vertical direction. When you use the command line you are entering points on the drawing. The grid is a guide for you and the red crosshairs represent 0 on the drawing….that is 0,0 or X=0,Y=0 so when you enter points it will always be X,Y with the X always the first dimension. You will understand this better when we actually run through the exercise. So now lets give it a try: if you make a mistake click edit, undo from the menu bar.

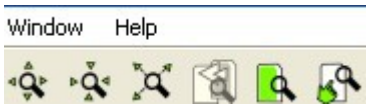
1. Left click one time in the command line box. The word command should turn blue to show its active.
2. We have to tell it what we are drawing so type line and press the enter key on the keypad.
3. It should be asking us now to enter the first point so type 0,0 and enter on the keyboard.
4. now it is asking us to enter the second point so type 70,0 and enter on the keyboard. You should see a horizontal line appear 70mm long. This is the base of the L-Block.
5. We need to enter the next point so type 70,50 and enter on the keyboard. You will notice it drew a vertical line to a point at X=70 and Y=50. That is a 50mm line.

6. Now type 50,50 and press enter. We have another horizontal line this time 20mm long.
7. Now type 50,20 and press enter. This draws another vertical line for us 30mm
8. Now type 0,20 and press enter.
9. Now type 0,0 to bring us back to our start point to complete our drawing of the L-Block . You can also type close to do this as well.
10. Right click 2 times to come out of the command.

As you can see, we can be very accurate drawing this way. If you wanted to draw a circle you simply would type circle and follow the command prompts. Same with rectangle. Go ahead and experiment with those now. You might try drawing a 5.5 radius hole with the center point at the 100,70 for instance. That is an 11mm hole which would be hard to draw any other way.
Take the opportunity now to save your drawing using file, save or clicking the save Icon.

6. PAN AND ZOOM

Pan and zoom are very useful tools in LibreCAD. The zoom tool is invaluable when you need to move up close to an entity to work on it. This is especially true when the area is very small, or several lines drawn close together. As you will see in a moment, there are several ways to use zoom.
Pan allows you to move the drawing up, down, right, or left. This is especially useful if your drawing is large. Pan and zoom are accomplished using the Icons below.



Starting from the left, is the zoom in icon. Click on this and you gradually zoom in on the drawing. The next Icon is the zoom out icon. Click on this and you gradually out on the drawing. The next Icon is autozoom which zooms you in faster. The next Icon is the previous view Icon which when clicked returns you to the last view. The next Icon is window zoom which allows you to put a window around a certain area and zooms you right into the area. It is the fastest way to zoom in. I particularly love using this because I can get close up in a small area very fast, do my work, and click the previous view icon to bring me back out of zoom quickly. The last Icon on the right is Pan. Click this icon and place your curser in the work area and hold down the left mouse button. You can move the drawing all over the work area and view the drawing area outside the work area also.
You should still have your L-Block drawing out on your work bench so take some time now and experiment with Pan and Zoom.
To use the zoom window:

1. Click the zoom window icon
2. Move your curser down into the work area. Notice you have the orange reference lines and the curser turns to a magnifying glass. Move the curser by the area you want to zoom and hold down the left mouse button DO NOT RELEASE THE BUTTON YET but move the mouse to create a window around the area you want to zoom. When you have done that release the left mouse button and you will zoom right into the area. The smaller the zoom window you create, the closer you will zoom into the area.
3. When you are done, click the previous view icon to zoom back out.

7. INFO ICON

On the Icon menu on the left you will find the Info Icon. with this icon you can actually measure an entity without having to dimension it. It is useful for checking your work as you draw or for a general check of information of an entity. When you click this Icon you will get the following Icon menu.

The top icon on the left allows you to measure point to point. The top right icon lets you measure point to a line. The middle left icon lets you measure an angle. The middle right icon lets you measure total length of entities and the bottom icon lets you measure the area of a polygon. These icons are simple to use as you just click one point or entity and then click the other point or entity and the results will be displayed on the bottom in the command information box.
Since you have the L-Block drawing on your workbench, go ahead and take a few measurements now.